

## EXHIBIT 4

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF LOUISIANA  
LAFAYETTE DIVISION**

<b>TOTAL REBUILD, INC.,</b>	§	
	§	<b>Civil Action No. 6:15-cv-01855-RFD-CBW</b>
<b>Plaintiff,</b>	§	
	§	
	§	
<b>vs.</b>	§	
	§	
	§	
<b>PHC FLUID POWER, L.L.C.</b>	§	<b>JUDGE BRIAN JACKSON</b>
	§	
	§	
<b>Defendant.</b>	§	

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**PLAINTIFF TOTAL REBUILD INC.'S SECOND SUPPLEMENTAL DISCLOSURE OF  
ASSERTED CLAIMS AND PRELIMINARY INFRINGEMENT CONTENTIONS AND  
ACCOMPANYING DOCUMENT PRODUCTION**

Pursuant to Scheduling Order (Doc. 50), and the Parties agreed upon compliance with a modified version of the Patent Rules as set forth under the Local Rules of the United States District Court for the Eastern District of Texas for patent specific deadlines (“P.R.”), Plaintiff Total Rebuild, Inc. (“Total”) provides its Supplemental Disclosure of Asserted Claims and Supplemental Infringement Contentions and Accompanying Document Production against PHC Fluid Power, L.L.C. (“PHC”) in this action.

Total reserves the right to supplement these Infringement Contentions, including the list of accused products and services, based upon further discovery. Further, Total may amend or supplement any of these disclosures and contentions in view of any claim construction ruling(s) issued by the Court or any position taken by PHC in this action, pursuant to P.R. 3-7. Total, therefore, expressly reserves the right to amend or supplement its identification of asserted claims, accused instrumentalities, and priority dates, as well as its claim charts, based on further investigation and discovery.

**I. SUPPLEMENTAL IDENTIFICATION OF INFRINGED CLAIMS AND ACCUSED INSTRUMENTALITIES PURSUANT TO P. R. 3-1 (A) AND (B)**

A. U.S. Patent Number 8,146,428 B2

1. P.R. 3-1(a) – Infringed Claims

Total presently contends that PHC infringes claims 3-5, 11-15, and 18-19 of U.S. Patent No. 8,146,428 B2 (“the ’428 Patent”) based on Total’s understanding of the information currently available to Total regarding PHC’s Accused Instrumentalities identified below.

2. P.R. 3-1(b) – Accused Instrumentalities

Total presently identifies the following PHC products as “Accused Instrumentalities” under all applicable subsections of 35 U.S.C. § 271 with respect to the respective asserted claims: PHC’s , PHC’s “Bunker Test Systems”, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, and such devices and/or systems associated or used in conjunction with PHC’s Point and Click Remote Control Systems and E-Stop Safety Inter-Lock Packages. Such Accused Instrumentalities being made, used, rented, offered for sale, or sold in, or imported into, the United States since the ‘428 patent issued, including all services supporting such PHC products, such as unit repair services, training services, support services, and implementation and customization services. These identifications are based on a preliminary understanding of information currently available to Total and upon the disclosures made by PHC during ongoing

discovery, and Total reserves the right to supplement these identifications and claim chart as discovery proceeds.

As PHC employs an inconsistent designation structure for its advertised products, such Accused Instrumentalities may further extend to PHC's advertised: High Pressure Hydrostatic Testing Systems, Automated High Pressure Testing Systems, Custom Hydrostatic Pressure Test Systems, Hydrostatic Test Packs, High/Low Hydraulic Test Skid, Multiple Valve Test Cabinet, Portable Offshore Test Cart, Portable Dual Pump Pack, Remote Gas/Liquid Test System, Remote Control Pump Skid, Remote Control Bunker System, Complete Turn Key Valve Test Package, and/or such systems including PHC's Portable Pressure Test Carts, PHC Data Acquisition System, and Hydraulic Control Panel, yet, as PHC has only provided a limited disclosure regarding its units to Total and as Total has not yet been permitted to examine the units, Total reserves the right to supplement the identifications and claim chart to include such units as discovery proceeds.

**II. SUPPLEMENTAL CHART IDENTIFYING CLAIM ELEMENTS WITHIN ACCUSED INSTRUMENTALITIES PURSUANT TO P. R. 3-1(C)**

Total provides a chart, attached as Exhibit A, which identifies where each limitation of each asserted claim is found in representative proof for each of the Accused Instrumentalities. The first column of each chart recites the limitations of the asserted claim verbatim. The second column shows an example of where a corresponding element is found in representative proof for each of the Accused Instrumentalities. These identifications are based on a preliminary understanding of information currently available to Total, and Total reserves the right to supplement these charts as discovery proceeds.

**III. SUPPLEMENTAL LITERAL INFRINGEMENT AND INFRINGEMENT UNDER THE DOCTRINE OF EQUIVALENTS PURSUANT TO P. R. 3-1(D)**

Total presently contends that the PHC Accused Instrumentalities literally infringe the asserted claims of the '428 Patent. Nevertheless, with respect to any claim element or limitation that may be found not to be literally embodied in the Accused Instrumentalities, Total contends in the alternative that the Accused Instrumentalities embody such claim elements or limitations under the doctrine of equivalents and that any claim element or limitation not found to be literally met is equivalently met because any difference between the claim element or limitation and the Accused Instrumentalities is not a substantial difference. Accordingly, Total contends that any asserted claim which the Accused Instrumentalities are not found to be embodied literally is nevertheless embodied by the Accused Instrumentalities under the doctrine of equivalents under an operative doctrine of equivalents test, e.g., function- way-result or insubstantial differences tests.

#### **IV. SUPPLEMENTAL DISCLOSURE PURSUANT TO P. R. 3-1(F)**

Based on presently available information and current analysis, Total identifies the following Total products (at least as to certain members of the family of products) as products that practice at least one or more of the asserted claims of the '428 Patent since its priority date of Aug. 8, 2008: the Total "Patented Safety Test System" product, which practices, incorporates, or reflects Claims 3-5 and 11-15. Further, Total offers high pressure testing services which practice, incorporate, and reflect Claims 18-19. See Total's web page at: <http://totalrebuild.com/>. Total's response is based on information currently known to Total and is without prejudice to Total's right to supplement its response during the course of litigation.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that on this, the 27<sup>th</sup> day of August, 2017, a copy of Plaintiff's Supplemental Disclosure Of Asserted Claims And Preliminary Infringement Contentions And Accompanying Document Production was delivered upon counsel of record for PHC Fluid Power, L.L.C via electronic mail.

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/s/ Chase A. Manuel

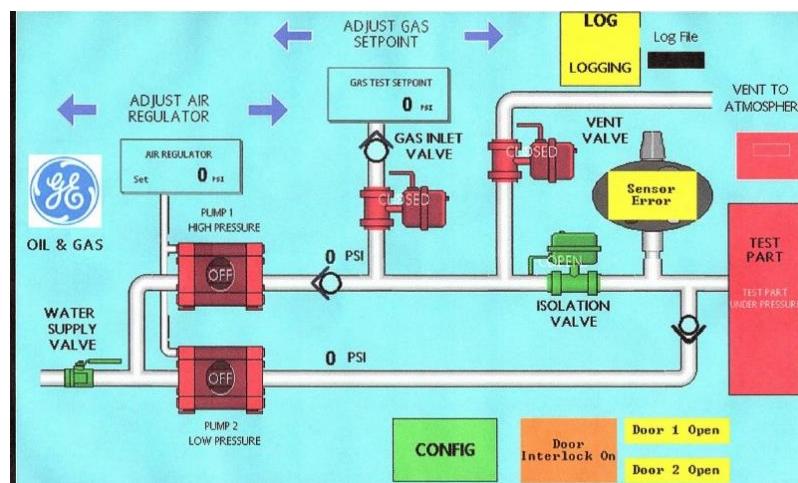
Chase A. Manuel

**EXHIBIT A**

**Total's Preliminary Infringement Contentions**

<b>U.S. Patent No. 8,146,428 B2</b>	<b>Accused Instrumentalities</b>
<b>Claim 1.</b> A safety system for testing high-pressure devices comprising:	PHC's systems are “high pressure hydrostatic testing systems” operating with liquids and gases, advertising “[a] wide variety of safety devices [] available with any of [their] high pressure testing systems”. See Hydrostatic Testing Equipment description, [ <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/</a> ].
an explosion-proof safety housing;	<p>The PHC Systems are described wherein “[a]ll high pressure is contained in the test cell” (See Automated High Pressure Testing Systems description, [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/</a>]).</p> <p>PHC's test cells being a 20 foot test cell with its own door or lid (description of PHC's Hydraulic Control Panel, [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>]).</p> <p>PHC's Custom Hydrostatic Pressure Test Systems description stating “[t]hese systems can be provided as a <b>completely enclosed cabinethttp://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/] (<b>emphasis added</b>).</b></p> <p>Pneumatic and Hydraulic Systems Brochure, previously provided as Exhibit D to Total's original Disclosure Of Asserted Claims And Preliminary Infringement Contentions And Accompanying Document Production, Complete Turn Key Valve Test Package description stating “remote controllable <b>pump and valve cabinet</b>”.</p> <p>PHC's Hydrostatic Test Packs disclosing, “<b>self-contained</b> with all the components built-in an open frame stainless steel rack”. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>] (<b>emphasis added</b>).</p> <p>PHC's Portable Pressure Test Carts disclosing, “control box”. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>]. Exhibit D (<b>emphasis added</b>).</p> <p>Multiple Valve Test Cabinet description describing “<b>pressure test cabinets</b> include pumps, controls and manual valves for pressurization”. Exhibit D (<b>emphasis added</b>).</p> <p>Hydrostatic Test and Gas Charging Cabinet description describing “<b>Test cabinets</b> are available for hydro-testing or gas testing”. Exhibit D (<b>emphasis added</b>).</p> <p>PHC's Bunker Test Systems, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, disclosing the system as having a “<b>Bunker</b>”. See Exhibit E at Total Rebuild 580, 586, 602-603, 606, 608-609, 611-612, 615-619, 621, 623-624, 626-627, 630-635, 638-639, 641-645, 647-648, 651-654, 658, 661-666 (<b>emphasis added</b>).</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as “High/Low</p>

	<p>Pump Skid”, denoted with the model no. prefix “PHC-PS…”, disclosing the system containing a “bunker”. See Exhibit F at Total Rebuild/PHC 667, 673, 679-680, 684-685.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM…”, describing that the system as comprising a “<b>Bunker</b>” also described as a “NEMA 12 enclosure.” See Exhibit G at Total Rebuild/PHC 689-690(<b>emphasis added</b>).</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES…”, describing that the system comprises an “enclosure to house the PLC and all switches.” See Exhibit H at Total Rebuild/PHC 696-697.</p> <p>See also Exhibit D photographic depictions of enclosures and enclosed cabinets of PHC’s Remote Control Bunker System, Remote Gas/Liquid Test System, and Portable Offshore Test Cart.</p>
a high- pressure pneumatics testing equipment located within said housing;	<p>PHC’s automated high pressure testing systems, stating that “[t]ests will not begin if any safety interlock device is not activated” and that “[a]ll high pressure is contained in the test cell”, implying that the testing equipment is within the housing. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/</a>].</p> <p>PHC’s Hydrostatic Test Packs disclosing, that the system is “self-contained” to “generate liquid pressures, oil or water up to 60,000psi” with “all the components build-in”. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC’s Portable Pressure Test Carts having “[a]ll of the components [] mounted and plumbed in a stainless steel or powder-coated, 2-wheel cart with a sloped front control box containing the valves and gauges” with “[d]esigns for pressures up to 100,000 psi are available. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p> <p>PHC’s Hydraulic Control Panel describing that its hydrostatic testing systems test pits contain pumps to test tools inside the test pits. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>The first and second subassemblies of PHC’s Complete Turn Key Valve Test Package disclosing the large stainless steel reservoir having a high flow pump and the cabinet described as a pump and valve cabinet. Exhibit D.</p> <p>Multiple Valve Test Cabinet description describing “pressure test cabinets <b>include pumps, controls and manual valves for pressurization</b>”. Exhibit D (<b>emphasis added</b>).</p> <p>Portable Offshore Test Cart described as having a reservoir and pumps. Exhibit D.</p> <p>PHC’s Bunker Test Systems, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB…”, disclosing the system as containing “the main High Pressure system components inside one 1\4” thick stain less steel Cabinet along with the high pressure pump and valves.” See Exhibit E at Total Rebuild/PHC 663, 666. See also Exhibit E at Total Rebuild/PHC 597 with attention to the pump marked “High Pressure” in the control layout for system controls:</p>



PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", describing that the "Pump/Valve Rack" is "Inside Bunker". See Exhibit F at Total Rebuild/PHC 667, 673.

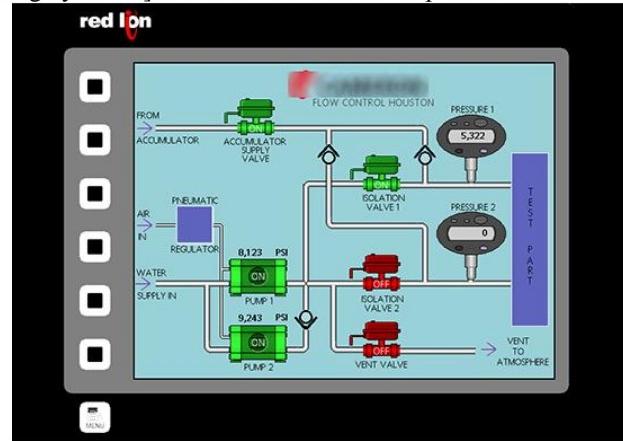
PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", describing the system as having "pumps" and that "[t]he system components will be contained in a NEMA 12 enclosure." See Exhibit G at Total Rebuild/PHC 690.

PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", describing that the four test rooms enclose equipment for testing. See Exhibit H at Total Rebuild/PHC 696-697.

Upon information and belief, the PHC Hydrostatic Test and Gas Charging Cabinet, Remote Gas/Liquid Test System, and Remote Control Bunker System are equipped with high-pressure pneumatics testing equipment within their housings. Exhibit D.

a bleed valve coupled to said high-pressure pneumatics testing equipment;

PHC's Automated High Pressure Testing Systems boast use of valve components within its pressure system which can be used to depressurize the system. [<http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/>]. See also "vent valve" depicted:



PHC's Hydrostatic Test Packs disclosing, that the system can be equipped with

	<p>vent valves and relief valves for additional safety. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC's Portable Pressure Test Carts containing safety devices, "such as relief valves". [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p> <p>PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", disclosing the system as equipped with a "Vent Valve" coupled to the High-Pressure Pump. See Exhibit E at Total Rebuild/PHC 586, 588-594, 603, 611, 618, 626, 631, 633, 643, 650, 652, 661, 663, 664, 666. See also Exhibit E at Total Rebuild/PHC 597 with attention to the "Vent Valve" in the control layout for system controls:</p>
	<p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", describing the system as having a "vent valve". See Exhibit F at Total Rebuild/PHC 667, 673, 679, 684.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", describing the valve manifold system as being capable of "vent[ing] all pressure". See Exhibit G at Total Rebuild/PHC 689-690. Upon information and belief, such capability being facilitated by a vent or bleed valve.</p> <p>Upon information and belief, PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", further includes a vent valve or other exhausting valve mechanism similar to other PHC devices implementing a proximity switch for venting the contained pressure in the system in the vent of personnel opening the bunker doors during testing. See Exhibit H.</p> <p>Upon information and belief, all of PHC's hydrostatic testing equipment use bleed valves coupled to the high pressure testing equipment within the housing.</p>
a closeable access opening in said housing for inserting a	PHC's description of its Hydraulic Control Panel discloses that PHC's test cells and test pits contain a "door/lid". [ <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a> ].

<p>high-pressure device for testing within said housing;</p>	<p>PHC Automated High Pressure Testing Systems as having “[p]roximity switches” integrated into the system “to completely depressurize the system in the event of personnel entering into the test area”, shown as having an access.</p>  <p style="text-align: center;">Automated High Pressure Testing Systems [http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!].</p> <p>PHC’s Bunker Test Systems, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, discloses the system as having “doors” in the bunker system. See Exhibit E at Total Rebuild/PHC 580, 584, 602, 612, 616-617, 627, 632, 634, 641-644, 653, 657, 659, 662-663, 665-666.</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, describing the system as having a “door”. See Exhibit F at Total Rebuild/PHC 667, 673, 679-680, 684-685.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, describing the bunker as having “doors”. See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, describing that the four test rooms have doors. See Exhibit H. See also schematic depiction of the four test rooms having doors. Exhibit H at Total Rebuild/PHC 691-692, 694, 696-697.</p> <p>See also the photographic depictions of PHC’s Custom Hydrostatic Pressure Test Systems (<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>) and High/Low Hydraulic Test Skid, Complete Turn Key Valve Test Package, Portable Offshore Test Cart, Portable Test Cart, Hydrostatic Test and Gas Charging Cabinet, Remote Gas/Liquid Test System, and Remote Control Bunker System, each showing an access. Exhibit D.</p> <p>Upon information and belief, the housings of PHC’s hydrostatic testing equipment contain an access in their housings to allow for the placement of the desired tools for testing within the housing.</p>
<p>means within said housing for coupling said high-pressure pneumatics testing equipment to said high-pressure device for testing;</p>	<p>PHC’s Hydrostatic Test Packs describing that “these hydrostatic test packs are self-contained with all the components built-in”. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC’s Portable Pressure Test Carts disclosing “[a]ll of the components are mounted and plumbed”. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p>

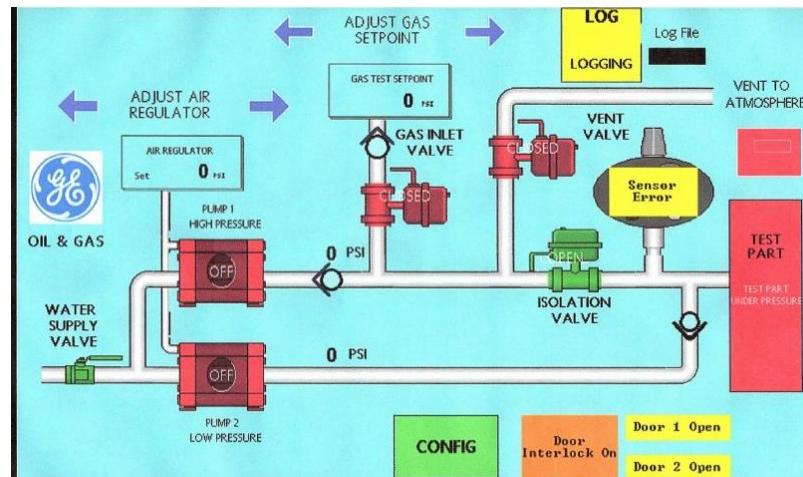
PHC's Hydraulic Control Panel describing that PHC's test cells have "transfer pumps that pump corrosion inhibitor test fluid to the tools inside of the test pits." [http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/].

PHC's High/Low Hydraulic Test Skid having a large volume reservoir with dual parallel air operated pumps for high flow, high pressure hydraulic power and manual 4-way directional control valves. Exhibit D.

PHC's Portable Offshore Test Cart having pumps. Exhibit D.

PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", expressly describe "coupling", "tubing", "hose", "collar", "tee", and "elbow" for coupling the pumps to the equipment to be tested. Exhibit E at Total Rebuild/PHC 600-601, 607-608, 614-615, 622-623, 629-630, 635, 638-640, 645, 647-648.

Furthermore, as can be seen in the depicted the control layout for system controls showing the "Test Part" is coupled to the High-Pressure Pump by such couplings, tubing, hose, collars, tees, and elbows. See Exhibit E at Total Rebuild/PHC 597:



PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", contains various "hose", "tubing", and "couplings" used to interconnect the device to be tested to the testing equipment. See Exhibit F at Total Rebuild/PHC 670, 676, 680, 682, 685, 687.

Upon information and belief, PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", contains means for coupling a device to be tested to the high pressure testing equipment located within the bunker to facilitate the testing of equipment by the system.

PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", is describes "plumbing" within the cabinets. See Exhibit H at Total Rebuild 696. Upon information and belief, the plumbing is the means in the system for coupling the high pressure pumps to the device to be tested.

	<p>See also the photographic depictions of PHC's Remote Gas/Liquid Test System showing pumps, plumbing, hose, manifolds, etc. within the housing.</p> <p>Upon information and belief, all of PHC's housed testing systems contain means within their housings to couple the desired equipment to be tested to the high pressure testing equipment.</p>
a control panel located remote from said housing; and	<p>PHC's Hydraulic Control Panel advertised for external control of test cells and further shown in a remote condition to the testing system:</p>  <p style="text-align: center;">Hydraulic Control Panel</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC's Automated High Pressure Testing Systems describing use of an "operator's control station" for controlling the system which may be a mouse or a touch-screen to operate all components and is further shown in a remote condition to the testing system.</p>  <p style="text-align: center;">Automated High Pressure Testing Systems</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>PHC's Hydrostatic Test Packs disclosing "controls and gauges are panel mounted in a top plate for easy use and accessibility" on the external surface of the housing. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC's Portable Pressure Test Carts shown and described as having a "control box" over the housing.</p> 

	<p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p> <p>See Exhibit D advertisement for PHC's Remote Gas/Liquid Test System and Remote Control Bunker System having "enclosed cabinets" advertised as being "Remote Control Systems".</p> <p>PHC Bunker Test System, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", expressly discloses that the control console of PHC's Bunker Test Systems are located "outside the bunker." See Exhibit E at Total Rebuild/PHC 611, 626, 661, 664.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", discloses the use of a "Control Console (Outside Bunker)". Exhibit F at Total Rebuild/PHC 667, 673.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", is expressly described as being remotely controlled with a "control panel" mounted "onto the exterior wall of the test bunker." See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", is described as having a "wall mount electrical control panel". See Exhibit H at Total Rebuild/PHC 691.</p> <p>See also PHC's Custom Hydrostatic Pressure Test Systems (<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>) and High/Low Hydraulic Test Skid, Multiple Valve Test Cabinet, Portable Offshore Test Cart, Complete Turn Key Valve Test Package, Gas/Hyd Pump System advertised in Exhibit D having control systems depicted remote from their housings.</p>
means linking said high-pressure pneumatics testing equipment to said control panel for operating said high pressure pneumatics testing equipment within said safety housing from said control panel.	<p>PHC's Hydraulic Control Panel is described and shown as being connected via cables and/or tubing for controlling transfer pumps:</p> <div style="text-align: center;">  <p>Hydraulic Control Panel</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC's Automated High Pressure Testing Systems depicts cables and/or tubing connecting the control panel to the housing:</p> </div>

	 <p style="text-align: center;">Automated High Pressure Testing Systems [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>PHC's Bunker Test System, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", describes that "PHC will run all inter-connect electrical wiring and plumbing between the control console, lock-box, proximity switches and pump/valve frames" and that during installation "wiring to connect the consoles to the Pump/Valves Racks". Exhibit E at Total Rebuild 635, 645, 655. Such interconnection of the control panel with the pump/valve testing equipment allows for user control and facilitation of a test inside the bunker. See also "Interconnect Wiring" schematic as shown in Exhibit E at Total Rebuild 656.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", contains various "hose", "tubing", and "couplings" used to interconnect the control panel to the testing equipment. See Exhibit F at Total Rebuild/PHC 670, 676, 680, 682, 685, 687.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", describes that the control panel is connected to the valves and transducers within the bunker by wires and cables. See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>Upon information and belief, based upon the disclosure of the functionality of the PHC E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", the control panel of PHC's E-Stop Safety Inter-Lock Package is attached to the high pressure testing equipment located within the testing rooms. Exhibit H. Furthermore, it is inherent within PHC's Custom Hydrostatic Pressure Test Systems, Remote Gas/Liquid Test System, Remote Control Bunker System, Gas/Hyd Pump System, Hydrostatic Test and Gas Charging Cabinet, Portable Offshore Test Cart, Multiple Valve Test Cabinet, Complete Turn Key Valve Test Package, High/Low Hydraulic Test Skid, Hydrostatic Test Packs, and Portable Pressure Test Carts, each having remote control panels, that a means is present to link such panels to their respective testing housings.</p>
<b>Claim 3.</b> The safety system for testing high-pressure devices as described in <b>claim 1</b> further including: a sensor for sensing that said access opening is closed, said sensor coupled to said bleed valve to activate said bleed valve to prevent	<p>PHC's Automated High Pressure Testing Systems describe use of a "safety interlock device" which must be activated to begin a test and "Proximity switches" integrated into the system to completely depressurize the system in the event personnel should enter the test area.</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>Each door of PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", are described as each having "proximity switches" "wired along with [] directional valves" and which "<b>indicate to the system when [the doors] are</b></p>

<p>pressure buildup in the high-pressure testing equipment if the access opening is not closed.</p>	<p><b>closed</b>” and, in the event “any door is open, the system will not allow a test to be run. The pumps will be turned off, the vent and isolation valves will be opened, and the pump supply valves will be closed . <b>If any door is opened while a test is in progress, the system will automatically turn off the pumps and relieve the pressure.</b>” See Exhibit E at Total Rebuild/PHC 584 (<b>emphasis added</b>); see also descriptions of proximity switch functionality in Exhibit E at Total Rebuild/PHC 612, 627, 648, 662-663, 665-666. See also Exhibit E schematic depicting a “Door Switch”. Exhibit E at Total Rebuild 598.</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, describes use of a “proximity switch in a box for use with bunker door”. See Exhibit F at Total Rebuild/PHC 667, 673. The proximity switches are located “on each door” and signal for “shutting down of the system” wherein the “proximity switches for the bunker doors and a control solenoid valve in the control panel to stop all pumps and depressurize the system in question.” Exhibit F at Total Rebuild/PHC 679-680, 684-685.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, is expressly described as having a “proximity switch to detect when the doors are open”, where in the event of a door being opened the proximity switch will “both kill power to the system and vent the pressure.” See Exhibit G at Total Rebuild/PHC 690.</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, contains 16 proximity switches for each door in the four test rooms, wherein the proximity switches function similar that of other PHC proximity switches in PHC’s other systems to detect when a door is open, kill the power to the testing equipment, and vent pressure from the system, describing that the “panel will disable the functioning of individual room systems based upon the positions of the doors.” See Exhibit H at Total Rebuild/PHC 696-697.</p> <p>As Total’s initial contentions are only based upon its preliminary understanding of the limited information currently available in PHC’s web based advertisement and as Total has yet to be allowed to examine PHC’s devices, Total reserves the right to supplement as discovery proceeds.</p>
<p><b>Claim 4.</b> The safety system for testing high-pressure devices as described in <b>claim 3</b> wherein said sensor for sensing that said access opening is closed is located at said access opening.</p>	<p>PHC’s Automated High Pressure Testing Systems describe that such “safety interlock device” must be activated for a test to begin and that such “Proximity switches” integrated into the system are situated to depressurize the system in the event personnel enter the test area. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>PHC’s Bunker Test Systems, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, are describes “[m]ounting the proximity switches <b>on the door</b>”. Exhibit E at Total Rebuild/PHC 641 (<b>Emphasis Added</b>). See also Exhibit E at Total Rebuild 598, schematic depicting a “Door Switch”.</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, describes the “proximity switch” being “on each door”. Exhibit F at Total Rebuild 679, 684.</p> <p>Upon information and belief, the “proximity switch” of PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump</p>

	<p>Systems denoted with the model no. prefix “PHC-VM...”, is located at the door of the system bunker as PHC’s proximity switches are shown and described as being located at or on each door. Exhibit G.</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, describes that its proximity switches are located at each door. See Exhibit H at Total Rebuild 696-697.</p> <p>As Total’s initial contentions are only based upon its preliminary understanding of the limited information currently available in PHC’s web based advertisement and as Total has yet to be allowed to examine PHC’s devices, Total reserves the right to supplement as discovery proceeds.</p>
<b>Claim 5.</b> The safety system for testing high-pressure devices as described in <b>claim 3</b> wherein said bleed valve includes a spring maintaining said bleed valve in an opened condition to prevent pressure build-up in said high-pressure pneumatics testing equipment and is air operated to actuate said bleed valve to a closed condition to allow pressure build-up in said high-pressure pneumatics testing equipment.	<p>Though not directly described in the limited disclosure of PHC’s product description, it is believed that such feature is implied by the inclusion of “relief valves”. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>; <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>]; see also Exhibit D.</p> <p>Upon information and belief, PHC’s “Bunker Test Systems”, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...” employ “vent valves” which include a spring to actuate the vent valve.</p> <p>As Total’s initial contentions are only based upon its preliminary understanding of the limited information currently available in PHC’s limited production and as Total has yet to be allowed to examine PHC’s devices, Total reserves the right to supplement as discovery proceeds.</p>
Claim 11. A safety system for testing high-pressure devices comprising:	PHC’s systems are “high pressure hydrostatic testing systems” operating with liquids and gases, advertising “[a] wide variety of safety devices [] available with any of [their] high pressure testing systems”. See Hydrostatic Testing Equipment description, [ <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/</a> ].
an explosion-proof safety housing;	<p>The PHC Systems are described wherein “[a]ll high pressure is contained in the test cell” (See Automated High Pressure Testing Systems description, [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/</a>]).</p> <p>PHC’s test cells being a 20 foot test cell with its own door or lid (description of PHC’s Hydraulic Control Panel, [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>]).</p> <p>PHC’s Custom Hydrostatic Pressure Test Systems description stating “[t]hese systems can be provided as a <b>completely enclosed cabinethttp://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/] (<b>emphasis added</b>).</b></p> <p>Pneumatic and Hydraulic Systems Brochure, previously provided as Exhibit D to Total’s original Disclosure Of Asserted Claims And Preliminary Infringement Contentions And Accompanying Document Production, Complete Turn Key Valve</p>

	<p>Test Package description stating “remote controllable <b>pump and valve cabinet</b>”.</p> <p>PHC’s Hydrostatic Test Packs disclosing, “<b>self-contained</b> with all the components built-in an open frame stainless steel rack”.  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/]</a> (<b>emphasis added</b>).</p> <p>PHC’s Portable Pressure Test Carts disclosing, “control box”.  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/]</a>. Exhibit D (<b>emphasis added</b>).</p> <p>Multiple Valve Test Cabinet description describing “<b>pressure test cabinets</b> include pumps, controls and manual valves for pressurization”. Exhibit D (<b>emphasis added</b>).</p> <p>Hydrostatic Test and Gas Charging Cabinet description describing “<b>Test cabinets</b> are available for hydro-testing or gas testing”. Exhibit D (<b>emphasis added</b>).</p> <p>See also Exhibit D photographic depictions of enclosures and enclosed cabinets of PHC’s Remote Control Bunker System, Remote Gas/Liquid Test System, and Portable Offshore Test Cart.</p> <p>PHC’s Bunker Test Systems, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, disclosing the system as having a “<b>Bunker</b>”. See Exhibit E at Total Rebuild 580, 586, 602-603, 606, 608-609, 611-612, 615-619, 621, 623-624, 626-627, 630-635, 638-639, 641-645, 647-648, 651-654, 658, 661-666 (<b>emphasis added</b>).</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, disclosing the system containing a “bunker”. See Exhibit F at Total Rebuild/PHC 667, 673, 679-680, 684-685.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, describing that the system as comprising a “<b>Bunker</b>” also described as a “NEMA 12 enclosure.” See Exhibit G at Total Rebuild/PHC 689-690(<b>emphasis added</b>).</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, describing that the system comprises an “enclosure to house the PLC and all switches.” See Exhibit H at Total Rebuild/PHC 696-697.</p>
high-pressure pneumatics testing equipment located within said housing;	<p>PHC’s automated high pressure testing systems, stating that “[t]ests will not begin if any safety interlock device is not activated” and that “[a]ll high pressure is contained in the test cell”, implying that the testing equipment is within the housing. <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/]</a>.</p> <p>PHC’s Hydrostatic Test Packs disclosing, that the system is “self-contained” to “generate liquid pressures, oil or water up to 60,000psi” with “all the components build-in”. <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/]</a>.</p> <p>PHC’s Portable Pressure Test Carts having “[a]ll of the components [] mounted and plumbed in a stainless steel or powder-coated, 2-wheel cart with a sloped front</p>

control box containing the valves and gauges” with “[d]esigns for pressures up to 100,000 psi are available. [http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/].

PHC’s Hydraulic Control Panel describing that its hydrostatic testing systems test pits contain pumps to test tools inside the test pits.  
[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/].

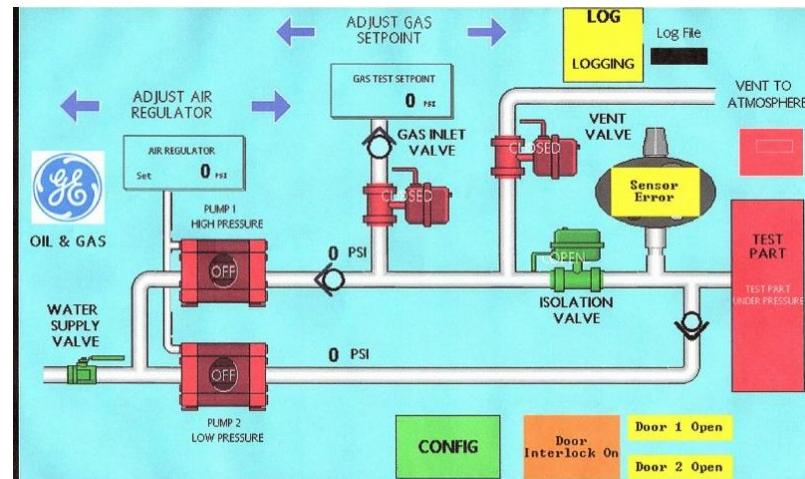
The first and second subassemblies of PHC’s Complete Turn Key Valve Test Package disclosing the large stainless steel reservoir having a high flow pump and the cabinet described as a pump and valve cabinet. Exhibit D.

Multiple Valve Test Cabinet description describing “pressure test cabinets **include pumps, controls and manual valves for pressurization**”. Exhibit D (**emphasis added**).

Portable Offshore Test Cart described as having a reservoir and pumps. Exhibit D.

Upon information and belief, the PHC Hydrostatic Test and Gas Charging Cabinet, Remote Gas/Liquid Test System, and Remote Control Bunker System are equipped with high-pressure pneumatics testing equipment within their housings. Exhibit D.

PHC’s Bunker Test Systems, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, disclosing the system as containing “the main High Pressure system components inside one 1\4” thick stain less steel Cabinet along with the high pressure pump and valves.” See Exhibit E at Total Rebuild/PHC 663, 666. See also Exhibit E at Total Rebuild/PHC 597 with attention to the pump marked “High Pressure” in the control layout for system controls:



PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, describing that the “Pump/Valve Rack” is “Inside Bunker”. See Exhibit F at Total Rebuild/PHC 667, 673.

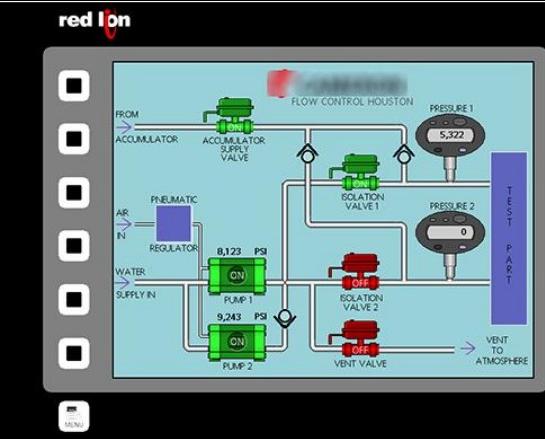
PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, describing the system as having “pumps” and that “[t]he system components will

	<p>be contained in a NEMA 12 enclosure.” See Exhibit G at Total Rebuild/PHC 690.</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, describing that the four test rooms enclose equipment for testing. See Exhibit H at Total Rebuild/PHC 696-697.</p>
a closeable access opening in said housing for inserting a high-pressure device for testing within said housing;	<p>PHC’s description of its Hydraulic Control Panel discloses that PHC’s test cells and test pits contain a “door/lid”. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC Automated High Pressure Testing Systems as having “[p]roximity switches” integrated into the system “to completely depressurize the system in the event of personnel entering into the test area”, shown as having an access.</p> <div style="text-align: center;">  <p>Automated High Pressure Testing Systems  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!]</a>.</p> <p>See also the photographic depictions of PHC’s Custom Hydrostatic Pressure Test Systems (<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>) and High/Low Hydraulic Test Skid, Complete Turn Key Valve Test Package, Portable Offshore Test Cart, Portable Test Cart, Hydrostatic Test and Gas Charging Cabinet, Remote Gas/Liquid Test System, and Remote Control Bunker System, each showing an access. Exhibit D.</p> <p>Upon information and belief, the housings of PHC’s hydrostatic testing equipment contain an access in their housings to allow for the placement of the desired tools for testing within the housing.</p> <p>PHC’s Bunker Test Systems, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, discloses the system as having “doors” in the bunker system. See Exhibit E at Total Rebuild/PHC 580, 584, 602, 612, 616-617, 627, 632, 634, 641-644, 653, 657, 659, 662-663, 665-666.</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, describing the system as having a “door”. See Exhibit F at Total Rebuild/PHC 667, 673, 679-680, 684-685.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, describing the bunker as having “doors”. See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, describing that the four test rooms have doors. See Exhibit H. See also schematic depiction of the four test rooms having doors. Exhibit H at Total Rebuild/PHC 691-692, 694, 696-697.</p> </div>

	<p>means within said housing for coupling said high-pressure pneumatics testing equipment to said high-pressure device for testing;</p> <p>PHC's Hydrostatic Test Packs describing that "these hydrostatic test packs are self-contained with all the components built-in". [http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/].</p> <p>PHC's Portable Pressure Test Carts disclosing "[a]ll of the components are mounted and plumbed". [http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/].</p> <p>PHC's Hydraulic Control Panel describing that PHC's test cells have "transfer pumps that pump corrosion inhibitor test fluid to the tools inside of the test pits." [http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/].</p> <p>PHC's High/Low Hydraulic Test Skid having a large volume reservoir with dual parallel air operated pumps for high flow, high pressure hydraulic power and manual 4-way directional control valves. Exhibit D.</p> <p>PHC's Portable Offshore Test Cart having pumps. Exhibit D.</p> <p>See also the photographic depictions of PHC's Remote Gas/Liquid Test System showing pumps, plumbing, hose, manifolds, etc. within the housing.</p> <p>Upon information and belief, all of PHC's housed testing systems contain means within their housings to couple the desired equipment to be tested to the high pressure testing equipment.</p> <p>PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", expressly describe "coupling", "tubing", "hose", "collar", "tee", and "elbow" for coupling the pumps to the equipment to be tested. Exhibit E at Total Rebuild/PHC 600-601, 607-608, 614-615, 622-623, 629-630, 635, 638-640, 645, 647-648. Furthermore, as can be seen in the depicted the control layout for system controls showing the "Test Part" is coupled to the High-Pressure Pump by such couplings, tubing, hose, collars, tees, and elbows. See Exhibit E at Total Rebuild/PHC 597:</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low</p>
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	<p>Pump Skid”, denoted with the model no. prefix “PHC-PS…”, contains various “hose”, “tubing”, and “couplings” used to interconnect the device to be tested to the testing equipment. See Exhibit F at Total Rebuild/PHC 670, 676, 680, 682, 685, 687.</p> <p>Upon information and belief, PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM…”, contains means for coupling a device to be tested to the high pressure testing equipment located within the bunker to facilitate the testing of equipment by the system.</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES…”, describes “plumbing” within the cabinets. See Exhibit H at Total Rebuild 696. Upon information and belief, the plumbing is the means in the system for coupling the high pressure pumps to the device to be tested.</p>
a control panel located remote from said housing;	<p>PHC’s Hydraulic Control Panel advertised for external control of test cells and further shown in a remote condition to the testing system:</p>  <p style="text-align: center;">Hydraulic Control Panel</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC’s Automated High Pressure Testing Systems describing use of an “operator’s control station” for controlling the system which may be a mouse or a touch-screen to operate all components and is further shown in a remote condition to the testing system.</p>  <p style="text-align: center;">Automated High Pressure Testing Systems</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>PHC’s Hydrostatic Test Packs disclosing “controls and gauges are panel mounted in a top plate for easy use and accessibility” on the external surface of the housing. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC’s Portable Pressure Test Carts shown and described as having a “control box” over the housing.</p>

	 <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p> <p>See Exhibit D advertisement for PHC's Remote Gas/Liquid Test System and Remote Control Bunker System having "enclosed cabinets" advertised as being "Remote Control Systems".</p> <p>See also PHC's Custom Hydrostatic Pressure Test Systems (<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>) and High/Low Hydraulic Test Skid, Multiple Valve Test Cabinet, Portable Offshore Test Cart, Complete Turn Key Valve Test Package, Gas/Hyd Pump System advertised in Exhibit D having control systems depicted remote from their housings.</p> <p>PHC Bunker Test System, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", expressly discloses that the control console of PHC's Bunker Test Systems are located "outside the bunker." See Exhibit E at Total Rebuild/PHC 611, 626, 661, 664.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", discloses the use of a "Control Console (Outside Bunker)". Exhibit F at Total Rebuild/PHC 667, 673.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", is expressly described as being remotely controlled with a "control panel" mounted "onto the exterior wall of the test bunker." See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", is described as having a "wall mount electrical control panel". See Exhibit H at Total Rebuild/PHC 691.</p>
a bleed valve coupled to said high-pressure testing equipment;	PHC's Automated High Pressure Testing Systems boast use of valve components within its pressure system which can be used to depressurize the system. [ <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/</a> ]. See also "vent valve" depicted:



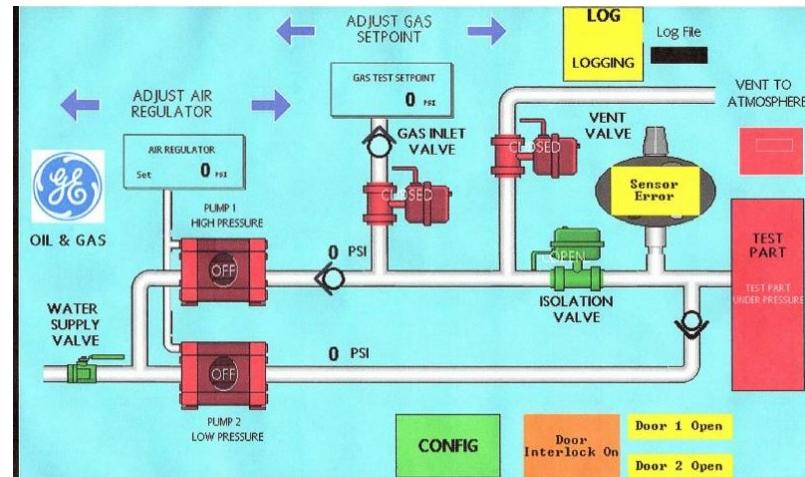
PHC's Hydrostatic Test Packs disclosing, that the system can be equipped with vent valves and relief valves for additional safety.

[<http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/>].

PHC's Portable Pressure Test Carts containing safety devices, "such as relief valves". [<http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/>].

Upon information and belief, all of PHC's hydrostatic testing equipment use bleed valves coupled to the high pressure testing equipment within the housing.

PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", disclosing the system as equipped with a "Vent Valve" coupled to the High-Pressure Pump. See Exhibit E at Total Rebuild/PHC 586, 588-594, 603, 611, 618, 626, 631, 633, 643, 650, 652, 661, 663, 664, 666. See also Exhibit E at Total Rebuild/PHC 597 with attention to the "Vent Valve" in the control layout for system controls:

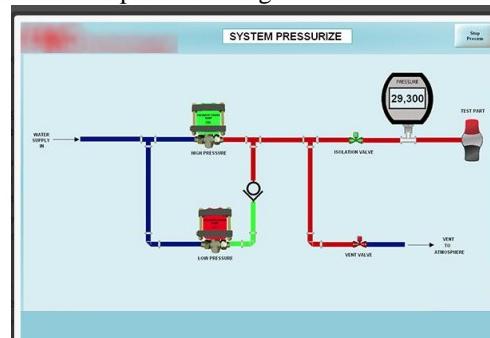


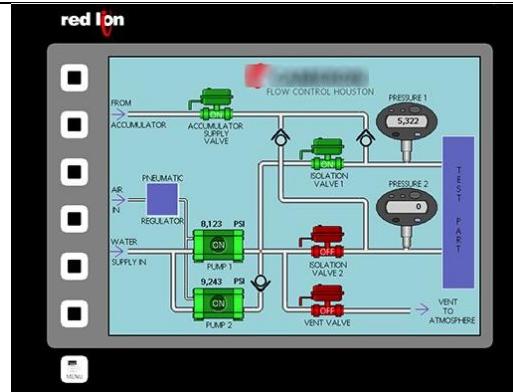
PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", describing the system as having a "vent valve". See Exhibit F at Total Rebuild/PHC 667, 673, 679, 684.

	<p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", describing the valve manifold system as being capable of "vent[ing] all pressure". See Exhibit G at Total Rebuild/PHC 689-690. Upon information and belief, such capability being facilitated by a vent or bleed valve.</p> <p>Upon information and belief, PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", further includes a vent valve or other exhausting valve mechanism similar to other PHC devices implementing a proximity switch for venting the contained pressure in the system in the event of personnel opening the bunker doors during testing. See Exhibit H.</p>
a sensor for sensing that said access opening is closed, said sensor coupled to said bleed valve to activate said bleed valve to prevent pressure buildup in the high-pressure testing equipment if the access opening is not closed; and	<p>PHC's Automated High Pressure Testing Systems describe use of a "safety interlock device" which must be activated to begin a test and "Proximity switches" integrated into the system to completely depressurize the system in the event personnel should enter the test area.  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!]</a>.</p> <p>As Total's initial contentions are only based upon its preliminary understanding of the limited information currently available in PHC's web based advertisement and as Total has yet to be allowed to examine PHC's devices, Total reserves the right to supplement as discovery proceeds.</p> <p>Each door of PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", are described as each having "proximity switches" "wired along with [] directional valves" and which "<b>indicate to the system when [the doors] are closed</b>" and, in the event "any door is open, the system will not allow a test to be run. The pumps will be turned off, the vent and isolation valves will be opened, and the pump supply valves will be closed . <b>If any door is opened while a test is in progress, the system will automatically turn off the pumps and relieve the pressure.</b>" See Exhibit E at Total Rebuild/PHC 584 (<b>emphasis added</b>); see also descriptions of proximity switch functionality in Exhibit E at Total Rebuild/PHC 612, 627, 648, 662-663, 665-666. See also Exhibit E schematic depicting a "Door Switch". Exhibit E at Total Rebuild 598.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", describes use of a "proximity switch in a box for use with bunker door". See Exhibit F at Total Rebuild/PHC 667, 673. The proximity switches are located "on each door" and signal for "shutting down of the system" wherein the "proximity switches for the bunker doors and a control solenoid valve in the control panel to stop all pumps and depressurize the system in question." Exhibit F at Total Rebuild/PHC 679-680, 684-685.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", is expressly described as having a "proximity switch to detect when the doors are open", where in the event of a door being opened the proximity switch will "both kill power to the system and vent the pressure." See Exhibit G at Total Rebuild/PHC 690.</p>

	<p>PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", contains 16 proximity switches for each door in the four test rooms, wherein the proximity switches function similar that of other PHC proximity switches in PHC's other systems to detect when a door is open, kill the power to the testing equipment, and vent pressure from the system, describing that the "panel will disable the functioning of individual room systems based upon the positions of the doors." See Exhibit H at Total Rebuild/PHC 696-697.</p>
means linking said high-pressure pneumatics testing equipment to said control panel for operating said high pressure pneumatics testing equipment within said safety housing from said control panel.	<p>PHC's Hydraulic Control Panel is described and shown as being connected via cables and/or tubing for controlling transfer pumps:</p> <div style="text-align: center;">  <p>Hydraulic Control Panel</p> </div> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC's Automated High Pressure Testing Systems depicts cables and/or tubing connecting the control panel to the housing:</p> <div style="text-align: center;">  <p>Automated High Pressure Testing Systems</p> </div> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>Furthermore, it is inherent within PHC's Custom Hydrostatic Pressure Test Systems, Remote Gas/Liquid Test System, Remote Control Bunker System, Gas/Hyd Pump System, Hydrostatic Test and Gas Charging Cabinet, Portable Offshore Test Cart, Multiple Valve Test Cabinet, Complete Turn Key Valve Test Package, High/Low Hydraulic Test Skid, Hydrostatic Test Packs, and Portable Pressure Test Carts, each having remote control panels, that a means is present to link such panels to their respective testing housings.</p> <p>PHC's Bunker Test System, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", describes that "PHC will run all inter-connect electrical wiring and plumbing between the control console, lock-box, proximity switches and pump/valve frames" and that during installation "wiring to connect the consoles to the Pump/Valves Racks". Exhibit E at Total Rebuild 635, 645, 655. Such interconnection of the control panel with the pump/valve testing equipment allows for user control and facilitation of a test inside the bunker. See also "Interconnect Wiring" schematic as shown in Exhibit E at Total Rebuild 656.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", contains various "hose", "tubing", and "couplings" used to interconnect the control panel to the</p>

	<p>testing equipment. See Exhibit F at Total Rebuild/PHC 670, 676, 680, 682, 685, 687.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", describes that the control panel is connected to the valves and transducers within the bunker by wires and cables. See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>Upon information and belief, based upon the disclosure of the functionality of the PHC E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", the control panel of PHC's E-Stop Safety Inter-Lock Package is attached to the high pressure testing equipment located within the testing rooms. See Exhibit H.</p>
Claim 12. The safety system for testing high-pressure devices as described in <b>claim 11</b> wherein said means linking said high pressure pneumatics testing equipment to said control panel includes means for monitoring and recording of the operation of said high-pressure pneumatics testing equipment.	<p>PHC's Automated High Pressure Testing Systems are described as having "[d]ata acquisition systems and PTZ camera systems" and "Electro-Pneumatic systems" an operator to recognize an open or closed valve.  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!]</a>.</p> <p>PHC's Hydrostatic Test Packs are advertised as having "[c]hart recorders or transducers" incorporated into the test packs to record tests as well as "gauges" mounted on the top plate of the housing.  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/]</a>.</p> <p>PHC's portable test carts are described as having a "chart recorder". Exhibit D. optional chart recorder or data acquisition system</p> <p>Exhibit D further advertises PHC's Data Acquisition System for data logging and recording of pressure transducer values which, upon information and belief, may be used with any of PHC's Hydrostatic Pressure Test Systems.</p> <p>PHC's Custom Hydrostatic Pressure Test Systems disclose equipping a test system with a chart recorder or data acquisition system.  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/]</a>.</p> <p>See also PHC's depictions of all their Hydrostatic Testing Equipment, depicting use of computers, touch screens, chart recorders, and gauges.  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/">[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/]</a>;  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>;  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>;  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>;  <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>; and Exhibit D.</p> <p>The control panel of PHC's Bunker Test System, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", is expressly described as allowing a user to "[m]onitor the pressure in the part with the pressure indicator" and "monitor[] to ensure that the system will not build up pressure unless all doors are completely closed." See "Gas and Water Bunker Control System Operation Manual", Exhibit E at Total Rebuild/PHC 580, 589, 592. The control panel of the system is additionally described as being</p>

	<p>able to “control, monitor and datalog”. Exhibit E at Total Rebuild/PHC 632-633. PHC’s system is further described as having “video cameras”, display “monitors”, “pressure chart recorders”, “digital pressure displays”, and “data loggers”, wherein logged data can be retrieved by use of a “SD memory card” or through connecting a laptop via a “USB port on the front of the control console”. Exhibit E at Total Rebuild/PHC 595, 600, 602-604, 611-613, 615-619, 626-628, 630, 634, 640-641, 643-644, 650-654, 656, 661-666. Each test, saved in a “LOG folder”, contains the data from a test saved individually as CSV files. Exhibit E at Total Rebuild/PHC 595.</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS…”, describes the system as having “video cameras”, “flat screen monitor[s] mounted on the top of the control cabinet that will be able to view both cameras”, “digital pressure indicators” “pressure chart recorders”, “data logger[s] to digitally display and record”. See Exhibit F at Total Rebuild/PHC 679-680, 682-685, 687-688. The datalogging and recording equipment is expressly described as being a part of the remote control console and mounted in the control cabinet wherein the test data may be downloaded via connection to a USB port. Exhibit F at Total Rebuild/PHC 667.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM…”, describes the system as having “video cameras” connected to the control room via conduit and cables and a “data logging system” in the control room, Exhibit G at Total Rebuild/PHC 689-690. Further, it is further disclosed that “[w]hile running, a test, the main screen will display live graphing of the values from the pressure transducers. After completing a test, the operator can create a print ready report containing the data that he entered, a graph of the test, and the time and date. This report will be saved as a PDF for archiving and future use. The test data will also saved as a CVS file.” Exhibit G at Total Rebuild/PHC 690.</p> <p>Upon information and belief, based upon the disclosure of the functionality of the PHC E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES…”, the control panel of PHC’s E-Stop Safety Inter-Lock Package further contains or is connected to “video cameras”, display “monitors”, “pressure chart recorders”, “digital pressure displays”, and “data loggers” similar to that of the same devices included in other PHC testing systems.</p>
<p>Claim 13. The safety system for testing high-pressure devices as described in <b>claim 11</b> wherein said high-pressure equipment testing device includes a low-pressure pump, an intermediate-pressure pump, and a high-pressure pump to provide sequential increase in the pressure to said high-pressure devices being tested.</p>	<p>PHC’s Automated High Pressure Testing Systems depict use of high and low pressure pumps, as well as a pneumatic regulator:</p>  <p>The diagram illustrates a high-pressure testing system. It starts with a 'WATER SUPPLY' line entering a blue rectangular tank labeled 'SYSTEM PRESSURIZE'. From the tank, a blue line goes to a green pump labeled 'LOW PRESSURE'. A red line then connects to a red pump labeled 'HIGH PRESSURE'. After the high-pressure pump, a red line leads to an 'ISOLATION VALVE'. Following the valve, a red line continues to a pressure gauge labeled 'PRESSURE [29,300]'. From the gauge, a red line goes to a black valve labeled 'TEST PART'. Finally, a blue line leads to a black valve labeled 'VENT TO ATMOSPHERE'.</p>



[<http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!>]; see also Exhibit D. It is inherent that such desired pressure achieved by the pneumatic regulator be capable of providing an intermediate desired test pressure.

PHC's Hydrostatic Test Packs disclose "providing hydrostatic pressure for a range of applications", including pressures up to 60,000 psi, and offering a "variety of pressure ranges and flow rates". [<http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/>].

PHC's Portable Pressure Test Carts are described as having a capacity of pressures up to 100,000 psi. [<http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/>].

PHC's Dual Pump Cabinet with Data Acquisition advertises use of a high/low pump system providing high flow low pressure filling and high pressure low flow pressurization for testing. Exhibit D.

PHC's High/Low Hydraulic Test Skid discloses use of "dual parallel air operated pumps for high flow, high pressure hydraulic power". Exhibit D.

PHC's Complete Turn Key Valve Test Package discloses controllable pump and valve cabinet for generating liquid and/or gas pressure. Exhibit D.

PHC's Portable Dual Pump Pack describes use of pumps which may be set to apply high and low pressures including air controls. Exhibit D.

See also PHC's Portable Offshore Test Cart and Gas/Hyd Pump System, each of which disclose use of pumps in testing. Exhibit D.

It is inherent that the inclusion of high and low pressure pumps in the PHC hydrostatic test systems would also be capable of being employed as a low-pressure pump.

Upon information and belief, PHC's Remote Gas/Liquid Test System and Remote Control Bunker System include a low-pressure pump, an intermediate pressure pump, and a high-pressure pump.

PHC's Bunker Test System, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", describe use of an "air regulator to give you the pump output pressures that you need." Exhibit E at Total Rebuild/PHC 586. Upon information and belief, the air regulator of PHC's system functions equivalently to that of an intermediate pump

	<p>to achieve pressures between that of the low and high pressure pumps provided. See also the system schematic drawing in Exhibit E at Total Rebuild/PHC 596.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", employs an "Air regulator", similar to that of PHC's Bunker Test Systems. Exhibit F at Total Rebuild/PHC 669-670, 673, 675-676, 679, 682, 684, 687. Upon information and belief, the air regulator of PHC's system is similar to that of PHC's other high pressure testing systems and functions equivalently to that of an intermediate pump to achieve pressures between that of the low and high pressure pumps provided.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", describes use of "an electric/pneumatic air regulator for the pump." See Exhibit G at Total Rebuild/PHC 690. Upon information and belief, the air regulator of PHC's system is similar to that of PHC's other high pressure testing systems and functions equivalently to that of an intermediate pump to achieve pressures between that of the low and high pressure pumps provided.</p> <p>Upon information and belief, based upon the disclosure of the functionality of the PHC E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", the control panel of PHC's E-Stop Safety Inter-Lock Package is attached to an "air regulator" will be used in conjunction with high and low pressure pumps to achieve a desired test pressure. It is believed that such air regulators incorporated into these systems will function equivalently to that of an intermediate pump to achieve pressures between that of the low and high pressure pumps provided.</p>
Claim 14. The safety system for testing high-pressure devices as described in <b>claim 11</b> wherein said explosion-proof safety housing comprises a portable housing.	<p>PHC discloses that its Custom Hydrostatic Pressure Test Systems can be built to fit the unique requirements of each client, which Total asserts include portable housings. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>].</p> <p>PHC's Hydrostatic Test Packs are disclosed as "Small and Portable" as one of its key features. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC's Portable Pressure Test Carts are described as being a portable cart. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p> <p>See also PHC's Dual Pump Cabinet with Data Acquisition, Portable Offshore Test Cart, Multiple Valve Test Cabinet, Hydrostatic Test and Gas Charging Cabinet, Gas/Hyd Pump System, and Remote Control Bunker System, each depicted as having wheels for portability.</p> <p>As Total's initial contentions are only based upon its preliminary understanding of the limited information currently available to Total and Total has not yet been permitted to examine the devices of PHC, Total reserves the right to supplement as discovery proceeds.</p>
Claim 15. The safety system for testing high-pressure devices as described in <b>claim</b>	Though not directly described in the limited disclosure of PHC's product description, it is believed that such feature is implied by the inclusion of "relief valves". [ <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-test-packs/</a> ; <a href="http://pneumaticandhydraulic.com/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-test-packs/</a> ;

<p><b>11</b> wherein said bleed valve includes a spring maintaining said bleed valve in an opened condition to prevent pressure build-up in said high-pressure pneumatics testing equipment and is air operated in opposition to said spring to actuate said bleed valve to a closed condition to allow pressure build-up in said high-pressure pneumatics testing equipment.</p>	<p>testing-equipment/pressure-test-carts/]; see also Exhibit D.</p> <p>As Total's initial contentions are only based upon its preliminary understanding of the limited information currently available in PHC's web based advertisement and as Total has yet to be allowed to examine PHC's devices, Total reserves the right to supplement as discovery proceeds.</p> <p>Upon information and belief, PHC's "Bunker Test Systems", also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES..." employ "vent valves" which include a spring to actuate the vent valve.</p>
<p>Claim 16. A method for safely testing high-pressure devices comprising the steps of:</p>	<p>PHC offers a method of testing high-pressure devices through their "high pressure hydrostatic testing systems" operating with liquids and gases, advertising "[a] wide variety of safety devices [] available with any of [their] high pressure testing systems". See Hydrostatic Testing Equipment description, [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/</a>]; see also Exhibit D.</p>
<p>providing an explosion-proof safety housing;</p>	<p>The PHC Systems are described wherein "[a]ll high pressure is contained in the test cell" (See Automated High Pressure Testing Systems description, [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/</a>]).</p> <p>PHC's test cells being a 20 foot test cell with its own door or lid (description of PHC's Hydraulic Control Panel, [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>]).</p> <p>PHC's Custom Hydrostatic Pressure Test Systems description stating "[t]hese systems can be provided as a <b>completely enclosed cabinet</b>". [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>] (<b>emphasis added</b>).</p> <p>Pneumatic and Hydraulic Systems Brochure, previously provided as Exhibit D to Total's original Disclosure Of Asserted Claims And Preliminary Infringement Contentions And Accompanying Document Production, Complete Turn Key Valve Test Package description stating "remote controllable <b>pump and valve cabinet</b>".</p> <p>PHC's Hydrostatic Test Packs disclosing, "<b>self-contained</b> with all the components built-in an open frame stainless steel rack". [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>] (<b>emphasis added</b>).</p> <p>PHC's Portable Pressure Test Carts disclosing, "control box". [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>]. Exhibit D (<b>emphasis added</b>).</p> <p>Multiple Valve Test Cabinet description describing "<b>pressure test cabinets</b> include pumps, controls and manual valves for pressurization". Exhibit D (<b>emphasis added</b>).</p>

	<p>Hydrostatic Test and Gas Charging Cabinet description describing “<b>Test cabinets</b> are available for hydro-testing or gas testing”. Exhibit D (<b>emphasis added</b>).</p> <p>See also Exhibit D photographic depictions of enclosures and enclosed cabinets of PHC’s Remote Control Bunker System, Remote Gas/Liquid Test System, and Portable Offshore Test Cart.</p> <p>PHC’s Bunker Test Systems, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, disclosing the system as having a “<b>Bunker</b>”. See Exhibit E at Total Rebuild 580, 586, 602-603, 606, 608-609, 611-612, 615-619, 621, 623-624, 626-627, 630-635, 638-639, 641-645, 647-648, 651-654, 658, 661-666 (<b>emphasis added</b>).</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS...”, disclosing the system containing a “bunker”. See Exhibit F at Total Rebuild/PHC 667, 673, 679-680, 684-685.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, describing that the system as comprising a “<b>Bunker</b>” also described as a “NEMA 12 enclosure.” See Exhibit G at Total Rebuild/PHC 689-690(<b>emphasis added</b>).</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, describing that the system comprises an “enclosure to house the PLC and all switches.” See Exhibit H at Total Rebuild/PHC 696-697.</p>
placing a low-pressure pump, an intermediate-pressure pump, and a high-pressure pump within said housing to provide sequential increase in the pressure to said testing high-pressure devices;	<p>PHC’s Automated High Pressure Testing Systems depict use of high and low pressure pumps, as well as a pneumatic regulator:</p> <p>[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-</p>

	<p>pressure-testing-systems/#!]; see also Exhibit D. It is inherent that such desired pressure achieved by the pneumatic regulator be capable of providing an intermediate desired test pressure.</p> <p>PHC's Hydrostatic Test Packs disclose "providing hydrostatic pressure for a range of applications", including pressures up to 60,000 psi, and offering a "variety of pressure ranges and flow rates". [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC's Portable Pressure Test Carts are described as having a capacity of pressures up to 100,000 psi. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p> <p>PHC's Dual Pump Cabinet with Data Acquisition advertises use of a high/low pump system providing high flow low pressure filling and high pressure low flow pressurization for testing. Exhibit D.</p> <p>PHC's High/Low Hydraulic Test Skid discloses use of "dual parallel air operated pumps for high flow, high pressure hydraulic power". Exhibit D.</p> <p>PHC's Complete Turn Key Valve Test Package discloses controllable pump and valve cabinet for generating liquid and/or gas pressure. Exhibit D.</p> <p>PHC's Portable Dual Pump Pack describes use of pumps which may be set to apply high and low pressures including air controls. Exhibit D.</p> <p>See also PHC's Portable Offshore Test Cart and Gas/Hyd Pump System, each of which disclose use of pumps in testing. Exhibit D.</p> <p>It is inherent that the inclusion of high and low pressure pumps in the PHC hydrostatic test systems would also be capable of being employed as a low-pressure pump.</p> <p>Upon information and belief, PHC's Remote Gas/Liquid Test System and Remote Control Bunker System include a low-pressure pump, an intermediate pressure pump, and a high-pressure pump.</p> <p>PHC's Bunker Test System, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", discloses employing a high and low pressure pump to pressurize a part to be tested. Exhibit E at Total Rebuild/PHC 586-587, 603, 611, 618, 626, 631, 633, 643, 661, 663, 664. See also control panel layout depicting high and low pressure pumps. Exhibit E at Total Rebuild/PHC 597. The system is also described as using an "air regulator to give you the pump output pressures that you need." Exhibit E at Total Rebuild/PHC 586. Upon information and belief, the air regulator of PHC's system functions equivalently to that of an intermediate pump to achieve pressures between that of the low and high pressure pumps provided. See also the system schematic drawing in Exhibit E at Total Rebuild/PHC 596.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", describes that each system contains a "Pump/Valve Rack (Inside Bunker)" or "High Pressure Stainless Steel Frame" which, respectively, include a low pressure pump aka "Diaphragm Fill Pump" or "Low Pressure Pump" each respectively having a pressure output fill time of 1:1 or 115:1 of that of the air regulator and, respectively, a high pressure</p>
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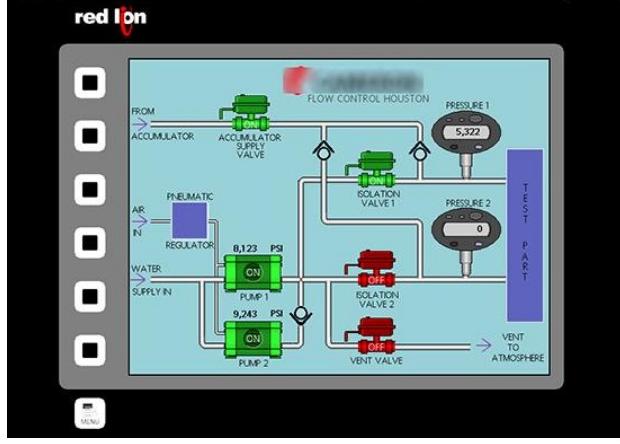
	<p>pump aka “Pressure Pump” or “Pressure Pump” each respectively having a pressure output fill time of 138:1 or 230:1 of that of the air regulator. Exhibit F at Total Rebuild/PHC 667, 670, 673, 675-676, 679, 681-682, 684, 686-687. The system further employs an “Air regulator”, similar to that of PHC’s Bunker Test Systems. Exhibit F at Total Rebuild/PHC 669-670, 673, 675-676, 679, 682, 684, 687. Upon information and belief, the air regulator of PHC’s system is similar to that of PHC’s other high pressure testing systems and functions equivalently to that of an intermediate pump to achieve pressures between that of the low and high pressure pumps provided.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM…”, describes that the system comprises a pump system. Exhibit G at Total Rebuild/PHC 689. Upon information and belief, due to the limited disclosure of the quote, such pump system includes high and low pressure pumps. The system is further described as using “an electric/pneumatic air regulator for the pump.” See Exhibit G at Total Rebuild/PHC 690. Upon information and belief, the air regulator of PHC’s system is similar to that of PHC’s other high pressure testing systems and functions equivalently to that of an intermediate pump to achieve pressures between that of the low and high pressure pumps provided.</p> <p>Upon information and belief, based upon the disclosure of the functionality of the PHC E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES…”, the control panel of PHC’s E-Stop Safety Inter-Lock Package is attached to an “air regulator” will be used in conjunction with high and low pressure pumps to achieve a desired test pressure. It is believed that such air regulators incorporated into these systems will function equivalently to that of an intermediate pump to achieve pressures between that of the low and high pressure pumps provided.</p>
forming a closeable access opening in said housing;	<p>PHC’s description of its Hydraulic Control Panel discloses that PHC’s test cells and test pits contain a “door/lid”. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC Automated High Pressure Testing Systems as having “[p]roximity switches” integrated into the system “to completely depressurize the system in the event of personnel entering into the test area”, shown as having an access.</p> <div style="text-align: center;">  <p>Automated High Pressure Testing Systems</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>See also the photographic depictions of PHC’s Custom Hydrostatic Pressure Test Systems (<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>) and High/Low Hydraulic Test Skid, Complete Turn Key Valve Test Package, Portable Offshore Test Cart, Portable Test Cart, Hydrostatic Test and Gas Charging Cabinet, Remote Gas/Liquid Test System, and Remote Control Bunker System, each showing an access. Exhibit D.</p> </div>

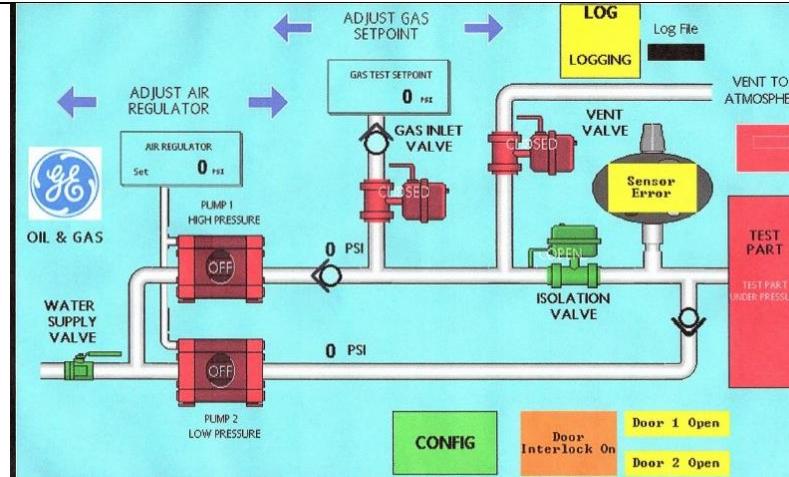
	<p>Upon information and belief, the housings of PHC's hydrostatic testing equipment contain an access in their housings to allow for the placement of the desired tools for testing within the housing.</p> <p>PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", discloses the system as having "doors" in the bunker system. See Exhibit E at Total Rebuild/PHC 580, 584, 602, 612, 616-617, 627, 632, 634, 641-644, 653, 657, 659, 662-663, 665-666.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", describing the system as having a "door". See Exhibit F at Total Rebuild/PHC 667, 673, 679-680, 684-685.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", describing the bunker as having "doors". See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", describing that the four test rooms have doors. See Exhibit H. See also schematic depiction of the four test rooms having doors. Exhibit H at Total Rebuild/PHC 691-692, 694, 696-697.</p>
inserting a high-pressure device for testing within said housing through said access opening;	<p>Total asserts that all of PHC's testing devices having an access allow for the insertion of devices within their housings.</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>; <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>; <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>; <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/#!</a>; <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/#!</a>; Exhibit D-H. See also control panel depiction of a "Test Part" within the housing of the Bunker Test System. Exhibit E at Total Rebuild/PHC 597.</p>
providing a control panel outside said housing;	<p>PHC's Hydraulic Control Panel advertised for external control of test cells and further shown in a remote condition to the testing system:</p>  <p style="text-align: center;">Hydraulic Control Panel</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC's Automated High Pressure Testing Systems describing use of an "operator's control station" for controlling the system which may be a mouse or a touch-screen to operate all components and is further shown in a remote condition to the testing</p>

	<p>system.</p>  <p style="text-align: center;">Automated High Pressure Testing Systems</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>PHC's Hydrostatic Test Packs disclosing "controls and gauges are panel mounted in a top plate for easy use and accessibility" on the external surface of the housing. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC's Portable Pressure Test Carts shown and described as having a "control box" over the housing.</p>  <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p> <p>See Exhibit D advertisement for PHC's Remote Gas/Liquid Test System and Remote Control Bunker System having "enclosed cabinets" advertised as being "Remote Control Systems".</p> <p>See also PHC's Custom Hydrostatic Pressure Test Systems (<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/custom-hydrostatic-pressure-test-systems/</a>) and High/Low Hydraulic Test Skid, Multiple Valve Test Cabinet, Portable Offshore Test Cart, Complete Turn Key Valve Test Package, Gas/Hyd Pump System advertised in Exhibit D having control systems depicted remote from their housings.</p> <p>PHC Bunker Test System, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", expressly discloses that the control console of PHC's Bunker Test Systems are located "outside the bunker." See Exhibit E at Total Rebuild/PHC 611, 626, 661, 664.</p> <p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", discloses the use of a "Control Console (Outside Bunker)". Exhibit F at Total Rebuild/PHC 667, 673.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve</p>
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	<p>Manifold and Pump Systems denoted with the model no. prefix “PHC-VM...”, is expressly described as being remotely controlled with a “control panel” mounted “onto the exterior wall of the test bunker.” See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>PHC’s E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES...”, is described as having a “wall mount electrical control panel”. See Exhibit H at Total Rebuild/PHC 691.</p>
coupling said control panel to the testing equipment inside said housing; and then	<p>PHC’s Hydraulic Control Panel is described and shown as being connected via cables and/or tubing for controlling transfer pumps:</p>  <p style="text-align: center;">Hydraulic Control Panel</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC’s Automated High Pressure Testing Systems depicts cables and/or tubing connecting the control panel to the housing:</p>  <p style="text-align: center;">Automated High Pressure Testing Systems</p> <p>[<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>Furthermore, it is inherent within PHC’s Custom Hydrostatic Pressure Test Systems, Remote Gas/Liquid Test System, Remote Control Bunker System, Gas/Hyd Pump System, Hydrostatic Test and Gas Charging Cabinet, Portable Offshore Test Cart, Multiple Valve Test Cabinet, Complete Turn Key Valve Test Package, High/Low Hydraulic Test Skid, Hydrostatic Test Packs, and Portable Pressure Test Carts, each having remote control panels, that a means is present to link such panels to their respective testing housings.</p> <p>PHC’s Bunker Test System, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB...”, describes that “PHC will run all inter-connect electrical wiring and plumbing between the control console, lock-box, proximity switches and pump/valve frames” and that during installation “wiring to connect the consoles to the Pump/Valves Racks”. Exhibit E at Total Rebuild 635, 645, 655. Such interconnection of the control panel with the pump/valve testing equipment allows for user control and facilitation of a test inside the bunker. See also “Interconnect Wiring” schematic as shown in Exhibit E at Total Rebuild 656.</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low</p>

	<p>Pump Skid”, denoted with the model no. prefix “PHC-PS…”, contains various “hose”, “tubing”, and “couplings” used to interconnect the control panel to the testing equipment. See Exhibit F at Total Rebuild/PHC 670, 676, 680, 682, 685, 687.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM…”, describes that the control panel is connected to the valves and transducers within the bunker by wires and cables. See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>Upon information and belief, based upon the disclosure of the functionality of the PHC E-Stop Safety Inter-Lock Package, denoted with the model no. prefix “PHC-ES…”, the control panel of PHC’s E-Stop Safety Inter-Lock Package is attached to the high pressure testing equipment located within the testing rooms. See Exhibit H.</p>
operating said high-pressure pneumatics testing equipment from said control panel for testing high-pressure devices.	<p>PHC’s Automated High Pressure Testing Systems are described as being touch screen operated wherein the electro-pneumatic systems provide the operator with lighted switches to indicate the presence of an open or closed valve. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!</a>].</p> <p>PHC’s Hydraulic Control Panel is described as operating to turn on and off the power to transfer pumps that pump corrosion inhibitor test fluid to the tools inside the test pits. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydraulic-control-panel/</a>].</p> <p>PHC’s High/Low Hydraulic Test Skid having a large volume reservoir with dual parallel air operated pumps for high flow, high pressure hydraulic power and manual 4-way directional control valves. Exhibit D.</p> <p>Upon information and belief, all of PHC’s testing systems contain means for operating the high pressure testing equipment to test desired equipment.</p> <p>PHC Bunker Test System, also identified as “Test Bench”, “Test Bunker”, “High/Low Pump System” denoted with the model no. prefix “PHC-TB…”, inherently allow by use of the provided control console of the Bunker Test Systems to control the system’s high pressure testing equipment. Exhibit E. Such operation is expressly described as the “control systems will <b>control</b>, monitor and data log [each] bunker... Each system will consist of a Red Lion [varying product number] HMI mounted on the surface of a 24” wide console <b>to operate [] pumps and [] valves</b>” and that the HMI is provided “for <b>operator control of the system</b>”. See Exhibit E at Total Rebuild/PHC 632-634, 643-644 (<b>Emphasis Added</b>).</p> <p>PHC’s Remote Control, Multiple Outlet Test System, also identified as “High/Low Pump Skid”, denoted with the model no. prefix “PHC-PS…”, inherently allow for controlling the high pressure testing equipment within the system through use of the described remote control console outside the bunker. See Exhibit F. The control console is expressly described as being used to manually toggle on and shut off the valves for each pump. See Exhibit F at Total Rebuild/PHC 679, 684.</p> <p>PHC’s Point and Click Remote Control Systems, associated with PHC’s Valve Manifold and Pump Systems denoted with the model no. prefix “PHC-VM…”, is described as having a control system that allows for a user to open and close the system’s valves, where the system is further provided with an “On/Off selector</p>

	<p>switch". See Exhibit G. It is further described that the communication cable run between the control room and the main control panel will allow for communication between a computer and the programmable logic controller. See Exhibit G at Total Rebuild/PHC 689-690.</p> <p>PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", inherently, by incorporation of the described control panel, allows for user control and operation of the system. The control panel of PHC's E-Stop Safety Inter-Lock Package is further described as providing programmable logic control of the system, "E-Stop demand", control solenoid valves, and selector switches to power on and off control. See Exhibit H at Total Rebuild/PHC 696-697.</p>
Claim 18. The method for safely testing high-pressure devices as described in <b>claim 16</b> including the step of: providing a bleed valve coupled to said high-pressure testing equipment; and	<p>PHC's Automated High Pressure Testing Systems boast use of valve components within its pressure system which can be used to depressurize the system. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/</a>]. See also "vent valve" depicted:</p>  <p>PHC's Hydrostatic Test Packs disclosing, that the system can be equipped with vent valves and relief valves for additional safety. [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>].</p> <p>PHC's Portable Pressure Test Carts containing safety devices, "such as relief valves". [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>].</p> <p>PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", disclosing the system as equipped with a "Vent Valve" coupled to the High-Pressure Pump. See Exhibit E at Total Rebuild/PHC 586, 588-594, 603, 611, 618, 626, 631, 633, 643, 650, 652, 661, 663, 664, 666. See also Exhibit E at Total Rebuild/PHC 597 with attention to the "Vent Valve" in the control layout for system controls:</p>



PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", describing the system as having a "vent valve". See Exhibit F at Total Rebuild/PHC 667, 673, 679, 684.

PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", describing the valve manifold system as being capable of "venting all pressure". See Exhibit G at Total Rebuild/PHC 689-690. Upon information and belief, such capability being facilitated by a vent or bleed valve.

Upon information and belief, PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", further includes a vent valve or other exhausting valve mechanism similar to other PHC devices implementing a proximity switch for venting the contained pressure in the vent of personnel opening the bunker doors during testing. See Exhibit H.

Upon information and belief, all of PHC's hydrostatic testing equipment use bleed valves coupled to the high pressure testing equipment within the housing.

providing a sensor for sensing that said access opening is closed, said sensor coupled to said bleed valve to activate said bleed valve to prevent pressure buildup in the high pressure testing equipment if the access opening is not closed.

PHC's Automated High Pressure Testing Systems describe use of a "safety interlock device" which must be activated to begin a test and "Proximity switches" integrated into the system to completely depressurize the system in the event personnel should enter the test area.  
[\[http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!\]](http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/automated-high-pressure-testing-systems/#!).

Each door of PHC's Bunker Test Systems, also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", are described as each having "proximity switches" "wired along with [] directional valves" and which "**indicate to the system when [the doors] are closed**" and, in the event "any door is open, the system will not allow a test to be run. The pumps will be turned off, the vent and isolation valves will be opened, and the pump supply valves will be closed . **If any door is opened while a test is in progress, the system will automatically turn off the pumps and relieve the pressure.**" See Exhibit E at Total Rebuild/PHC 584 (**emphasis added**); see also descriptions of proximity switch functionality in Exhibit E at Total Rebuild/PHC 612, 627, 648, 662-663, 665-666. See also Exhibit E schematic depicting a "Door Switch". Exhibit E at Total Rebuild 598.

	<p>PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", describes use of a "proximity switch in a box for use with bunker door". See Exhibit F at Total Rebuild/PHC 667, 673. The proximity switches are located "on each door" and signal for "shutting down of the system" wherein the "proximity switches for the bunker doors and a control solenoid valve in the control panel to stop all pumps and depressurize the system in question." Exhibit F at Total Rebuild/PHC 679-680, 684-685.</p> <p>PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", is expressly described as having a "proximity switch to detect when the doors are open", where in the event of a door being opened the proximity switch will "both kill power to the system and vent the pressure." See Exhibit G at Total Rebuild/PHC 690.</p> <p>PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES...", contains 16 proximity switches for each door in the four test rooms, wherein the proximity switches function similar that of other PHC proximity switches in PHC's other systems to detect when a door is open, kill the power to the testing equipment, and vent pressure from the system, describing that the "panel will disable the functioning of individual room systems based upon the positions of the doors." See Exhibit H at Total Rebuild/PHC 696-697.</p>
Claim 19. The method for safely testing high-pressure devices as described in <b>claim 18</b> wherein said bleed valve includes a spring maintaining said bleed valve in an opened condition to prevent pressure build-up in said high-pressure pneumatics testing equipment and is air operated to actuate said bleed valve to a closed condition to allow pressure build-up in said high-pressure pneumatics testing equipment.	<p>Though not directly described in the limited disclosure of PHC's product description, it is believed that such feature is implied by the inclusion of "relief valves". [<a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/hydrostatic-test-packs/</a>; <a href="http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/">http://pneumaticandhydraulic.com/hydrostatic-testing-equipment/pressure-test-carts/</a>]; see also Exhibit D.</p> <p>Upon information and belief, PHC's "Bunker Test Systems", also identified as "Test Bench", "Test Bunker", "High/Low Pump System" denoted with the model no. prefix "PHC-TB...", PHC's Remote Control, Multiple Outlet Test System, also identified as "High/Low Pump Skid", denoted with the model no. prefix "PHC-PS...", PHC's Point and Click Remote Control Systems, associated with PHC's Valve Manifold and Pump Systems denoted with the model no. prefix "PHC-VM...", PHC's E-Stop Safety Inter-Lock Package, denoted with the model no. prefix "PHC-ES..." employ "vent valves" which include a spring to actuate the vent valve.</p> <p>As Total's initial contentions are only based upon its preliminary understanding of the limited information currently available in PHC's web based advertisement and as Total has yet to be allowed to examine PHC's devices, Total reserves the right to supplement as discovery proceeds.</p>